different pronominal elements, or otherwise. The treatment of the personal endings in the modifying, and presumably older, conjugation may thus be said somewhat to resemble that of enclitics in Greek.

In the imperfect the present-stem is increased by the augment, consisting of a prefixed *ă.* Here, as in the other tenses in which it appears, it has invariably the accent, as being the distinctive element (originally probably an independent demonstrative adverb “ then ”) for the expression of past time. This shifting of the word-accent seems to have contributed to the further reduction of the personal endings, and thus to have caused the formation of a new, or secondary, set of terminations which came to be appropriated for secondary tenses and moods generally. As in Greek poetry, the augment is frequently omitted in Sanskrit.

The mood-sign of the subjunctive is *ă*, added to (the strong form of) the tense-stem. If the stem ends already in *ă*, the latter becomes lengthened. As regards the personal terminations, some persons take the primary, others the secondary forms, while others again may take either the one or the other. The first singular active, however, takes *ni* instead of *mi,* to distinguish it from the indicative. But besides these forms, showing the mood-sign *ă*, the subjunctive (both present and aorist) may take another form, without any distinctive modal sign, and with the secondary endings, being thus identical with the augmentless form of the preterite.

The optative invariably takes the secondary endings, with some peculiar variations. In the active of the modifying conjugation its mood-sign is yā, affixed to the weak form of the stem: *e.g.* root *as— syām = Lat. siem, sīm* (where Gr., from analogy to *iσrl,* &c., shows irregularly the strong form of the stem, *tlιμv,* for ίσ-ιη-ρ: as in 1st sing. of verbs in ω, it also has irregularly the primary ending, λebroijuI = S. *rece-y-am*); while in the *a*-conjugation and throughout the middle the mood-sign is *ī,* probably a contraction of *yā*: *e.g.*

*=φtfK>LS.*

Besides the ordinary perfect, made from a reduplicated stem, with distinction between strong (active singular) and weak forms, and a partly peculiar set of endings, the later language makes large use of a periphrastic perfect, consisting of the accusative of a feminine abstract noun in *ā* (*-ām*) with the reduplicated perfect forms of the auxiliary verbs *kar,* “ to do,” or *as* (and occasionally *bhū),* "to be.” Though more particularly resorted to for the derivative forms of conjugation—viz. the causative (including the so-called tenth conjugational class), the desiderative, intensive and denominative—this perfect-form is also commonly used with roots beginning with prosodically long vowels, as well as with a few other isolated roots. In the Rigveda this formation is quite un­known, and the Atharvan offers a single instance of it, from a causative verb, with the auxiliary *kar.* In the Vedic prose, on the other hand, it is rather frequent,@@1 and it is quite common in the later language.

In «addition to the ordinary participles, active and middle, of the reduplicated perfect—*e.g. jajan-vάn, yeyov-ws*: *bubudh-āná,* TcTw-µéï'o—there is a secondary participial formation, obtained by affixing the possessive suffix *vat* (*vant*) to the passive past parti­ciple: *e.g. krta-vant,* lit. “ having (that which is) done.” A secondary participle of this kind occurs once in the Atharvaveda, and it is occasionally met with in the Brāhmaṇas. In the later language, however, it not only is of rather frequent occurrence, but has assumed quite a new function, viz. that of a finite perfect-form; thus *krtavān, krtavantas,* without any auxiliary verb, mean, not “ having done,” but “ he has done,” “ they have done.”

The original Indo-Germanie future-stem formation in *sya,* with primary endings—*e.g. dāsyáti = δωfii* (for δωσeτι)—is the ordinary tense-form both in Vedic and classical Sanskrit—a preterite of it, with a conditional force attached to it (*ádāsyal*)*,* being also common to all periods of the language.

Side by side with this future, however, an analytic tense-form makes its appearance in the Brāhmaṇas, obtaining wider currency in the later language. This periphrastic future is made by means of the nominative singular of a *nomen agentis* in *tar* (*dātar,* nom. *dātā* = Lat. *dator),* followed by the corresponding present forms of *as,* “ to be ” (*dātā-'smi,* as it were, *daturus sum),* with the exception of the third persons, which need no auxiliary, but take the respective nominatives of the noun.

The aorist system is somewhat complicated, including as it does augment-preterites of various formations, viz. a radical aorist, sometimes with reduplicated stem—*e.g. ásthām = eστηv*: *śrudhí =* κλD0ι; *ádudrot*; an *a*-aorist (or thematic aorist) with or without reduplication—*e.g. áricas = eyιπts*: *ápaptam,* cf. *lπtφvw*; and several different forms of a sibilant-aorist. In the older Vedic language the radical aorist is far more common than the *a*-aorist, which Becomes more frequently used later on. Of the different kinds of sibilant-aorists, the most common is the one which makes its stem by the addition of *s* to the root, either with or without a connecting vowel *i* in different roots: *e.g.* root *ji—*I sing, *ájāisham,* I pl. *ájāishma*; *ákramisham, ákramishma.* A limited number of roots take a double aorist-sign with inserted connecting vowel (*sish* for *sis)—e.g. áyāsisham* (cf. *scrip-sis-ti*); whilst others—very rarely

in the older but more numerously in the later language—make their aorist-stem by the addition of *sa—e.g. ádikshas* = eòet£aî.

As regards the syntactic functions of the three preterites—the imperfect, perfect and aorist—the classical writers make virtually no distinction between them, but use them quite indiscriminately. In the older language, on the other hand, the imperfect is chiefly used as a narrative tense, while the other two generally refer to a past action which is now complete—the aorist, however, more frequently to that which is only just done or completed. The perfect, owing doubtless to its reduplicative form, has also not infrequently the force of an iterative, or intensive, present.

The Sanskrit, like the Greek, shows at all times a considerable power and facility of noun-composition. But, while in the older language, as well as in the earlier literary products of the classical period, such combinations rarely exceed thelimits compatible with the general economy of inflectional speech, during the later, artificial period of the language they gradually become more and more excessive, both in size and frequency of use, till at last they absorb almost the entire range of syntactic construction.

One of the most striking features of Sanskrit word-formation is that regular interchange of light and strong vowel-sounds, usually designated by the native terms of *guṇa* (quality) and *vṛiddhi* (increase). The phonetic process implied in these terms consists in the raising, under certain conditions, of a radical or thematic light vowel *i, u,* r, *l,* by means of an inserted *a*-sound, to the diphthongal (guṇa) sounds ă*i* (Sans. *ē*)*, ău* (Sans. *ō*), and the combination *ar* and *al* respectively, and, by a repetition of the same process, to the (vṛiddhi) sounds *āi, āu, ār, and āl* respectively. Thus from root *υid,* “ to know,” we have *vêda,* “ knowledge,” and therefrom *vāídika*;from *yuj, yoga, yāúgika.* While the interchange of the former kind, due mainly to accentual causes, was undoubtedly a common feature of Indo-Germanic speech, the latter, or vṛiddhi-change, which chiefly occurs in secondary stems, is probably a later development. Moreover, there can be no doubt that the vṛiddhi-vowels are really due to what the term implies, viz. to a process of “ increment," or vowel-raising. The same used to be universally assumed by comparative philologists as regards the relation between the guṇa-sounds *ăi* (*ē*) and *ău* (*ō*) and the respective simple *i*- and *u*-sounds. According to a more recent theory, however, which has been very generally accepted, we have rather to look upon the heavier vowels as the original, and upon the lighter vowels as the later sounds, produced through the absence of stress and pitch. The grounds on which this theory is recommended are those of logical consistency. In the analogous cases of interchange between *r* and *ar,* as well as *ḷ* and *al,* most scholars have indeed been wont to regard the syllabic *ṛ* and *ḷ* as weakened from original *ar* and *al,* while the native grammarians represent the latter as produced from the former by increment. Similarly the verb *as* (*ĕs*), “ to be, loses its vowel wherever the radical syllable is unaccented, *e.g. ásti,* Lat. *est—smás, s(u)mus*; opt. *syām,* Lat. *siēm (sīm).* On the strength of these analogous cases of vowel-modification we are, therefore, to accept some such equation as this

āsmi: smás = bkρκομat: eδρ(a)κοv = λAπω: λt,πew

= émi (etμt): imás (tμev for lμev)

— φebyω: φvyetv

*= dóhmi* (1*milk) : duhmás.*

Acquiescence in this equation would seem to involve at, least one important admission, viz. that original root-syllables contained no simple *i*- and *u*-vowels, except as the second element of the diphthongs *ai,* *ei, oi*; *au, eu, ou.* We ought no longer to speak of the roots *vid,* “to know” *dik,* “to show, to bid," *dhugh,* "to milk,” *yug,* "to join,” but of *veid, deik, dhaugh* or *dheugh, yeug,* &c. Nay, as the same law would apply with equal force to suffixal vowels, the suffix *nu* would have to be called *nau* or *neu*; and, in explaining, for instance, the irregularly formed *bAwυμι, δAκvvμtv,* we might say that, by the affixion of *veu* to the root δelk, the present- stem *δttκvd>* was obtained (*δt,κvtvμi*), which, as the stress was shifted forward, became 1 plur. *δυcvvμkσ*(*i*),*—*the subsequent modifications in the radical and formative syllables being due to the effects of “ analogy ” (cf. G. Meyer, *Griech. Gramm.,* § 487). Now, if there be any truth in the “ agglutination ” theory, according to which the radical and formative elements of Indo-Germanic speech were at one time independent words, we would have to be prepared for a pretty liberal allowance, to the parent language, of diphthongal mono- syllables such as *deík neú,* while simple combinations such as *dik nu* could only spring up after separate syllable-words had become united by the force of a common accent. But, whether the agglu- tinationists be right or wrong, a theory involving the priority of the diphthongal over the simple sounds can hardly be said to be one of great prima facie probability; and one may well ask whether the requirements of logical consistency might not be satisfied in some other, less improbable, way.

Now, the analogous cases which have called forth this theory turn upon the loss of a radical or suffixal *a* (*ĕ*), occasioned by the shifting of the word-accent to some other syllable, *e.g.* acc. *mātáram,* instr. *mātrá, πkτυμa,t, brτ6μηv*: *δepκομai, eδp(a)κοv*: *ásmi, Smás.* Might we not then assume that at an early stage of noun and verb inflection, through the giving way, under certain conditions, of the stem-*a* (*ĕ*)*,* the habit of stem-gradation, as an element of inflection,

@@@l It also shows occasionally other tense-forms than the perfect of the same periphrastic formation with *kar.*